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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)	
01600080aa	

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Application Number	Filed
09/988,653	Nov. 20, 2001

First Named Inventor	
Kazuhiko Isoyama	
Art Unit	**Examiner**
2151	Tran, N.

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).
Note: No more than five (5) pages may be provided.

I am the

☐ applicant/inventor.

☐ assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.
(Form PTO/SB/96)

☑ attorney or agent of record.
Registration number **32,635**

☐ attorney or agent acting under 37 CFR 1.34.
Registration number if acting under 37 CFR 1.34 _____

Signature

Michael E. Whitham
Typed or printed name

703-787-9400
Telephone number

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☑ *Total of 1 forms are submitted.

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Tradeamrk Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of

Kazuhiko Isoyama

Serial No. 09/988,653

Filed November 20, 2001

Confirmation No. 8991

Group Art Unit: No. 2151

Examiner Tran, N.

For QoS Server and Control Method for Allocating Resources

Mail Stop AF
Commissioner for Patents
PO Box 1450
Alexandria, Virginia 22313-1450

ATTACHMENT TO PRE-APPEAL BRIEF REQUEST FOR REVIEW

Sir:

This Pre-Appeal Brief Request for Review is being concurrently filed with a Notice of Appeal and a Petition for a Three month extension of time. The Commissioner is authorized to charge attorney's deposit account 50-2041 (Whitham, Curtis, Christofferson & Cook) for the fees due for the Notice of Appeal, Petition, and any other amounts required to gain consideration of this pre-appeal brief request for review.

The Invention

The invention is directed to a system which monitors the state of a network in regard to current levels of failures and received signal quality and determines required resource allocation *on the network* which will assure a required quality of service (QoS) based on *both* network state (e.g. failures and received signal quality on which resource allocation information is ultimately based) and an aggregate of calls (e.g. the calls currently in progress and the additional calls anticipated but not yet requested) while not allocating significantly more resources than are necessary to achieve such improvements in service. In other words, the invention simultaneously manages the allocation of resources in accordance with three different criteria; functions which were not available from the prior art prior to the present invention.

It should be understood that for a given desired level of QoS, some margin

or excess of resource allocation is generally required (or at least desirable) above that for the calls currently connected/being communicated (e.g. backup paths - see paragraph bridging pages 14 and 15) since network conditions may vary unpredictably. An excess of allocated resources is also generally required (or at least desirable) so that new calls may be accepted without delay for setup due to a need for processing to obtain additional allocation of resources for newly received call connection requests (see, for example) paragraph bridging pages 16 and 17). At the same time, it is desirable that the margin or excess of allocated resources be kept as small as possible while avoiding such delays and that the number of changes in resource allocation also be as few as possible. The present invention also requests or releases resources based on the number of connected calls (see page 15, lines 19 - 26). The operations to perform these functions are discussed from page 15, line 27, to page 17, line 9, with reference to Figure 6.

It is clear from that discussion, particularly in regard to thresholds for changing resource allocation and the corresponding network resources allocated and the dynamic modification thereof noted at page 16, lines 22 - 25, that the basic meritorious effects of the invention in regard to changing the margin of allocated resources above the resources currently in use, are supported by basing the computed resource allocation information on *both* the network state (e.g. failures and quality of received signal) and an aggregate of calls as recited in independent claims 1, 6, 37 and 42. Further, dynamically changing the network resource allocation policy in regard to resource allocation based on network state (e.g. failures and received signal quality) as recited in independent claims 4 and 40 is, itself, considered to be novel and central to the meritorious function of the invention in assuring sufficient but not excessive resource allocation to provide requested QoS for all calls while avoiding delay in setup of new calls.

In short, The invention involves resource allocation based on aggregation of calls before calls arrive. Thus, there is no setup delay with the invention. In addition, the invention involves feeding back the network state and traffic state to computation of resource allocation. This avoids operator settings.

Errors and Omissions

The Examiner has incorrectly concluded that each of claims 1-72 would be

obvious to one of ordinary skill in the art based on U.S. Patent 6,134,589 to Hultgren in view of U.S. Patent 6,978,745 to Feinberg, in view of U.S. Patent Publication 2006/0056298 to Nag.

The Examiner has admitted that Hultgren does not teach or suggest a network monitoring section for monitoring a network state or a resource allocating computing section based on failures and received signal quality (see 8/22/6 office action at the bottom of page 3).

The Examiner has also admitted that the combination of Hultgren and Feinberg does not show or suggest setting up resource allocation based on an aggregate of calls and resource allocation (see 8/23/6 office action at the third paragraph).

The Examiner has failed to appreciate that the Hultgren, Fienberg and Nag references would not be pieced together as he has proposed, as none of the references deal with (or even allude to) the problems which are solved by the present invention. That is, there is nothing in Hultgren, Feinberg and Nag, that would lead one of ordinary skill in the art to conclude that problems (not solved by any of the three references) could be successfully addressed by a combination of the three references–the *combination* of features recited in the claims would thus not be obvious to one of ordinary skill in the art.

As pointed out in the response filed June 5, 2006, Hultgren is principally directed to the marketing of excess network capacity to deliver QoS at a level above that originally requested in the call request, and is thus directed to a very different problem from that of the present invention and does not include many of the features of the invention explicitly recited in the claims, including the deficiencies admitted by the Examiner. It is respectfully submitted that these deficiencies of Hultgren are not mitigated in regard to the claimed subject matter by Feinberg and/or Nag et al.

Feinberg appears to be directed to maintaining QoS for existing calls merely by terminating selected calls which would cause degradation of other currently connected calls (See Abstract, last four lines, Figure 3 and column 6, line 57 to column 7, line 22). Thus, while Feinberg monitors a variety of QoS events such as those listed at column 5, lines 36 - 39, Feinberg does <u>not</u> teach or suggest determination of resources needed to maintain QoS in the presence of new call requests or to determine a resource allocation policy for requesting or releasing

resources based on those events (e.g. "resource requirements with reference to the network state information", as recited in claims 4 and 40), and does not teach or suggest dynamically altering resource allocation based on *both* an aggregate of calls and network state. In short, Feinberg is substantially irrelevant to the subject matter of the claimed invention. Feinberg merely shows that certain enumerated QoS events can be monitored. In Feinberg, the action is to terminate calls rather than dynamically altering the allocation of resources. The Fienberg approach to maintaining QoS is thus diametrically opposed to that of the invention. Moreover, the monitoring of QoS or the termination of calls as a response, as discussed in Feinberg, would not have any function in Hultgren which is directed to the marketing of *excess* bandwidth capacity. Therefor, Feinberg is not properly combinable with Hultgren.

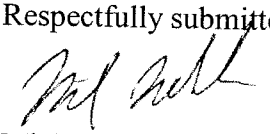
Nag et al. fails to teach features of the invention which are not taught by a combination of Hultgren and Feinberg (assuming such a combination could be made). Nag et al. considers an aggregate of calls which includes estimated call connection requests (based on historical data). Further, Nag et al. mentions that the pre-allocated reservation protocol "may be dynamically adjusted to account for actual usage" (paragraph [0030]. However, Nag et al. is directed to providing scalability of resource allocation processing as the number of calls becomes large by providing for messages to and from terminals to be multiplexed over a link between aggregation managers such that the aggregation managers "themselves appear as the actual application flow originators/recipients" (paragraph [0076]). However, the only alternative disclosed in Nag to simply terminating calls when the allocated resources become insufficient as disclosed in Feinberg is that the "aggregation manager may continue the application session establishment process and provide a *best effort* service for the request (*without the use of pre-allocated resources*" (paragraph [0068], emphasis added). No teaching of any particular technique for dynamic *adjustment of pre-allocated resources* (as distinct from dynamic *allocation* of those resources - see paragraph [0048]) is taught or suggested in Nag et al. Further, Nag does not show determining a resource allocation policy based on network state or allocation of resources based on both network state and an aggregation of calls. In addition, there is no teaching in Nag et al. of any processing in regard to resource allocation in response to the QoS events of Feinberg (admitted to be absent from Hultgren) and, as with Feinberg,

Nag et al. would have no function in the apparatus of Hultgren since the response to exceeding the allocated resources is either to terminate calls or use other resource for "best effort" service where requested QoS is not guaranteed.

Conclusion

It is respectfully submitted that the Examiner has not shown how the teachings, suggestions or evidence of the level of ordinary skill in the art discernable from the references applied answers the recitations of any claim in the application. Rather, the Examiner has admitted that neither network state monitoring nor determination of an aggregate of calls is used as a basis for resource allocation in Hultgren (which, it is respectfully submitted, also does not provide allocation of resources but merely seeks to market available resources) then cites Feinberg for monitoring QoS events but only terminating calls when resources are exceeded, and further, after admitting theat the combination of Hultgren and Feinberg do not teach allocation of resources based on an aggregate of calls, cites Nag et al.; thus glossing over the recitation of basing resource allocation *policy* on network state, recitations of derivation and processing of information ultimately based on the network state, and/or recitations of allocation of resources based on a *combination of conditions*. Thus the Examiner has not made and cannot make a *prima facie* demonstration of obviousness of any claim and the sole ground of rejection is clearly in error and, upon reconsideration, should be withdrawn.

Respectfully submitted,



Michael E. Whitham
Reg. No. 32,635

Whitham, Curtis, Christofferson & Cook, P.C.
11491 Sunset Hills Road, Suite 340
Reston, VA 20190

Tel. (703) 787-9400
Fax. (703) 787-7557
Customer No.: 30743